

### **REMARKS**

In the Action, claims 1-14 are rejected. In response, claim 1 is amended, and claims 15-19 are added. The pending claims in this application are claims 1-19, with claims 1, 2 and 7 being independent. In view of these amendments and the following comments, reconsideration and allowance are requested.

#### **The Obviousness-Type Double Patenting Rejection**

Claims 1-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 10-12 of copending application Serial No. 10/483,668. The rejection is based on the position that the claims differ by reciting different stereoisomers and that it is reasonable to expect a similar saliva inducing property for each isomer.

Initially, it is noted that the compounds of the two sets of claims are not stereoisomers as indicated in the Action. The claims of the copending application are directed to a method for imparting a salivation inducing effect using trans-pellitorin in an amount of 20 ppm or less. The claims of the present application are directed to a process for the production and a sensory ingredient comprising cis-pellitorin. The trans-pellitorin and the cis-pellitorin recited in the two sets of claims are not stereoisomers. Moreover, the processes of each set of claims are clearly different. The pending claims recite a production process and not a method of imparting a saliva inducing effect. Thus, the properties of the two compounds do not render the processes obvious.

Furthermore, the Action has not provided a reasonable basis for the assertion that cis-pellitorin has a similar saliva inducing property as the trans-pellitorin of the copending application. Thus, the Action has not established prima facie obviousness.

Moreover, the differences in the properties of trans-pellitorin and cis-pellitorin are described on page 5 of the specification and in Example 5 and the Comparative Examples. As disclosed on page 5, lines 15-21, the trans-pellitorin as in the copending application occur in pepper and its sensory impression has been described as primarily a numbing effect. The cis-pellitorin as disclosed on page 5, lines 9-13, has a surprising pleasant and extremely pungent and a warm flavor impression which is reminiscent of ethanol and is relatively long lasting. Thus, the statement in the Action that cis-pellitorin would be reasonably expected to have a similar saliva inducing property is incorrect.

Example 5A on pages 14 and 15 of the specification also discloses the profile of cis-pellitorin as having a pronounced feeling of warmth, immediately pungent and typical of alcohol. In contrast, as noted in Comparative Example 5C on page 15 of the specification, the profile of trans-pellitorin has a saliva stimulating, oily, fruity, slightly tingling and not pungent effect. Thus, the data presented in the specification demonstrate the differences between cis-pellitorin of the present application and trans-pellitorin of the copending application.

In addition, the claims of the copending application specifically recite the method for imparting a saliva inducing effect by adding to a preparation 20 ppm or less of the trans-pellitorin. Claim 2 of the present application specifically recites the sensory ingredient mixture containing at least 80 wt% of the cis-pellitorin and at least two other *N*-isobutylamides as identified in claim 2. Since the claims of the copending application specifically limit the amount of the trans-pellitorin to 20 ppm or less, it would not have been obvious to one of ordinary skill in the art to produce the claimed sensory ingredient mixture in the claimed amounts.

In view of the differences between the pending claims and the claims of the copending application, Applicants submit that the invention as presently claimed is not

obvious over the claims of the copending application. Accordingly, Applicants respectfully submit that the obviousness-type double patenting rejection should be withdrawn.

### **Rejection Under 35 U.S.C. § 103**

Claim 1 is rejected under 35 U.S.C. § 103(a) as being obvious over the article by Tanaka et al. Tanaka et al. is cited for disclosing a process of making 2E,4E-decadienoic isobutylamide. As noted in the Action, Tanaka et al. does not disclose the production of 2E,4Z-decadienoic isobutylamide (cis-pellitorin) as in the claimed invention.

Contrary to the suggestion in the Action, the starting products and the process of Tanaka et al. are not analogous with the claimed process or starting products. The invention of claim 1 is specifically directed to a process for the production of cis-pellitorin by reacting a 2E,4Z-decadienoic ester with isobutylamine in the presence of a catalyst. Tanaka et al. does not disclose or suggest the use of 2E,4Z-decadienoic acid ester as a starting compound and does not react the ester with isobutylamine.

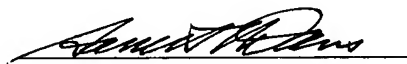
The process disclosed in Tanaka et al. specifically discloses the ethyl (2E, 4E)decadienoate as a precursor for the synthesis of pellitorine as an insecticidal compound. Moreover, the process disclosed in Tanaka et al. specifically carries out the alkaline hydrolysis of the ethyl (2E, 4E)decadienoate to produce the pure acid identified as Compound VII. The pure acid Compound VII is then reacted with isobutylamine in the presence of diethyl phosphorocyanidate in DMF to produce the pure pellitorine. There is no suggestion in Tanaka et al. of reacting the 2E,4Z-decadiene acid ester with isobutylamine in the presence of a catalyst. Moreover, Tanaka et al. clearly fails to disclose or suggest a catalyst which is capable of carrying out the reaction of the ester with isobutylamine as in the claimed invention.

In view of the deficiencies of Tanaka et al., claim 1 would not have been obvious to one of ordinary skill in the art. Accordingly, Applicants respectfully submit the rejection should be withdrawn.

New claims 15-19 are allowable as depending from allowable claim 1 and for reciting further features of the invention that are not disclosed or suggested in the art of record. For example, the art of record does not disclose the step of saponifying unreacted 2E,4Z-decadienoic acid ester as in claim 1, either alone or in combination with the process steps of claim 1. The art of record further fails to disclose the catalyst being an enzyme as in claim 16, the enzyme catalyst having lipase activity as in claim 17, or the enzyme being on a support as in claim 18, either alone or in combination with the process steps of claim 1. The art of record also fails to disclose the mixture being isolated by crystallization, chromatography, distillation or co-distillation as in claim 19, in combination with the features of claim 1.

In view of these amendments and the above comments, claims 1-19 are submitted to be in condition for allowance. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,

  
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Dated: Jan 24, 2008